

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### September 2007

Station: Westford  
 Latitude: 44° 37' 39" N Longitude: 73° 02' 29" W Elevation (Ground): 850 feet Time Zone: Eastern

Date	Temperature					Humidity Mean	Deg. Days		Precip Ty 1 fog 2 hvy fog 3 thunder 4 ice plt 5 hail 6 glaze 7 duststm 8 smk, hz 9 blw snw	Snow Cvr	Precip		Pressure Adj. to Sea Level			Wind						Sun Mean Index	
	Maximum	Minimum	Average	Mean	Dew Point		Heating Base 65°F	Cooling Base 65°F			Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg Speed	Res Speed	Res Dir	Peak		Minute		
																			Speed	Dir	Speed		Dir
1	2	3	4A	4B	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	68.4	47.0	57.7	58.0	49	74	7	0	.....	0	0.00	0.0	30.24	30.05	30.166	1.2	1.1	318	17	W	9	284	
2	74.5	42.9	58.7	59.1	46	66	6	0	.....	0	0.00	0.0	30.29	30.03	30.182	1.5	1.5	187	14	S	6	188	
3	81.5	56.8	69.1	67.4	54	63	0	5	.....	0	0.00	0.0	30.04	29.81	29.905	3.8	2.9	215	19	S	12	278	
4	69.7	47.5	58.6	58.3	44	62	6	0	.....	0	0.00	0.0	30.05	29.89	29.989	1.3	1.1	297	16	WSW	9	272	
5	66.7	41.8	54.2	53.5	44	73	10	0	.....	0	0.00	0.0	30.20	30.05	30.147	0.6	0.5	327	10	WSW	6	275	
6	80.6	45.0	62.8	65.1	56	73	2	0	..3.....	0	0.42	0.0	30.21	30.05	30.127	3.2	3.1	189	20	S	9	186	
7	87.8*	68.2	78.0*	76.6	65	68	0	13	.....	0	0.00	0.0	30.08	29.85	29.972	5.0	5.0	189	22	S	10	197	
8	86.3	56.6	71.5	73.9	65	75	0	7	.....	0	0.00	0.0	30.06	29.85	29.923	3.3	2.5	212	22	S	10	280	
9	59.0	50.3	54.6	55.6	53	92	10	0	.2.....	0	0.24	0.0	30.09	30.01	30.046	0.1	0.1	299	6	W	4	289	
10	71.0	51.7	61.4	60.0	56	87	3	0	.....	0	0.02	0.0	30.06	29.92	30.007	0.7	0.6	293	12	WNW	7	273	
11	66.8	51.0	58.9	59.7	57	92	6	0	..3.....	0	0.50	0.0	29.93	29.43	29.642	1.7	1.6	191	20	S	9	181	
12	65.9	49.7	57.8	57.0	49	74	7	0	.....	0	0.02	0.0	30.09	29.49	29.784	4.1	3.9	264	22	SW	11	282	
13	67.9	41.8	54.9	53.9	46	77	10	0	.....	0	0.00	0.0	30.23	30.09	30.153	0.7	0.6	221	10	ESE	7	288	
14	69.4	50.5	60.0	61.5	53	74	5	0	.....	0	0.00	0.0	30.12	29.80	29.975	4.7	4.7	188	31	S	14	194	
15	65.1	48.8	56.9	53.6	49	84	8	0	.....	0	0.97	0.0	30.07	29.75	29.877	3.9	3.0	266	26	WNW	14	189	
16	67.6	42.2	54.9	52.3	44	76	10	0	.....	0	0.00	0.0	30.39	30.37	30.381	0.2	0.2	280	6	W	4	278	
17	71.8	37.8*	54.8	53.5	45	75	10	0	.....	0	0.00	0.0	30.43	30.28	30.363	0.8	0.8	197	11	SSW	5	228	
18	75.6	48.1	61.8	60.7	49	66	3	0	.....	0	0.00	0.0	30.28	30.09	30.201	2.5	2.5	193	15	S	8	184	
19	75.9	53.1	64.5	62.2	54	75	0	0	.....	0	0.00	0.0	30.15	30.08	30.114	1.5	1.1	219	12	S	6	288	
21	79.7	46.3	63.0	62.9	56	80	2	0	.2.....	0	0.00	0.0	30.18	29.99	30.099	0.9	0.9	196	13	S	7	190	
22	79.1	61.2	70.1	69.9	59	69	0	5	.....	0	0.00	0.0	30.00	29.79	29.901	4.5	4.1	197	26	SW	14	188	
23	70.9	49.4	60.2	59.4	45	61	5	0	.....	0	0.00	0.0	30.17	29.97	30.094	2.6	2.5	278	19	W	11	280	
24	78.7	45.8	62.2	62.1	50	67	2	0	.....	0	0.00	0.0	30.23	30.01	30.127	1.4	1.1	223	11	W	8	274	
25	81.2	52.6	66.9	68.4	55	63	0	2	.....	0	0.00	0.0	30.04	29.84	29.936	3.9	3.9	191	22	S	11	194	
26	82.4	67.5	75.0	72.2	64	77	0	10	.....	0	0.07	0.0	29.92	29.80	29.841	3.0	2.6	215	20	NW	13	272	
27	74.6	61.0	67.8	66.2	63	89	0	3	..3.....	0	0.30	0.0	29.94	29.76	29.864	0.9	0.4	229	13	NW	7	286	
28	68.3	53.0	60.7	59.0	55	89	4	0	.2.....	0	0.42	0.0	29.94	29.72	29.796	1.4	1.2	280	18	W	11	278	
29	64.7	42.0	53.3	53.4	48	83	11	0	.....	0	0.00	0.0	30.41	29.94	30.226	1.3	1.2	298	17	W	10	279	
30	65.4	37.9	51.7*	50.5	44	80	13	0	.....	0	0.00	0.0	30.53	30.40	30.454	0.6	0.6	200	10	SSW	5	209	
Sum	Sum	-----	-----	---	----	Ttl	Ttl	Number of Days		For the month:													---
2117	1448					140	45			2.96	0.0	30.53	29.43	30.045	2.1	1.5	219	31	S	14	194		
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl	Date	Date	-----	----	----	----	----	Date	Date	Avg			
73.0	49.9	61.4	60.9	52	75.2	----	----	≥.01 inch		9	31.22	0.0	30	11	-----	----	----	----	14	14			
Number of Days						Season to Date	Snow, Ice ≥1.0 inch		0	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date							
Max Temperature			Min Temperature			232	343	Thunder	3	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	3	0.97	14-15	0.0	-	0						-					
0	0	0	0	----	----	Clear	8	Partly Cloudy			14	Cloudy			7								

NOTES:  
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Data in column 4A are (MAX+MIN) ÷ 2, whereas columns 4B, 5, 6, 15, 16, 23 are means via continuous observations for 24 hours.  
 Column 5: Dew point is calculated from temperature and humidity and is continuously averaged for 24 hours.  
 Data in columns 9, 10, 12 are entered manually by the station observer.  
 Columns 17-18: Resultant wind is calculated by the vector sum of continuous wind observations.  
 Column 23: Sunshine index is measured in Watts/m<sup>2</sup> and is continuously averaged for 24 hours.  
 Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.



# OBSERVATIONS AT 3-HOUR INTERVALS

## September 2007: Westford

Hour	SEP 19									SEP 20									SEP 21								
	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust
01	30.27	0.00	52	43	73	18	1	5	30.10	0.00	57	48	73	18	3	9	30.14	0.00	53	51	94	03	0	0			
04	30.27	0.00	50	44	81	17	1	4	30.08	0.00	54	48	81	21	0	4	30.14	0.00	50	49	95	03	0	0			
07	30.28	0.00	52	44	76	19	2	6	30.11	0.00	55	50	82	20	1	5	30.15	0.00	47	46	95	03	0	0			
10	30.25	0.00	62	48	62	18	5	15	30.14	0.00	62	55	76	17	3	12	30.17	0.00	65	61	87	18	1	5			
13	30.20	0.00	71	55	56	16	2	9	30.13	0.00	73	60	64	28	3	9	30.12	0.00	75	60	59	18	5	12			
16	30.15	0.00	76	57	53	23	1	9	30.10	0.00	75	60	59	00	1	6	30.05	0.00	78	63	59	17	3	9			
19	30.12	0.00	63	51	63	14	1	5	30.11	0.00	62	57	83	03	0	0	30.04	0.00	67	59	77	12	0	0			
22	30.10	0.00	61	50	68	17	6	14	30.14	0.00	55	53	94	03	0	0	30.03	0.00	64	57	79	18	0	3			
SEP 22									SEP 23									SEP 24									
01	29.99	0.00	62	58	87	18	0	0	29.99	0.00	60	43	55	27	2	7	30.17	0.00	55	45	71	31	1	5			
04	29.97	0.00	67	60	80	16	5	19	30.03	0.00	55	43	66	24	0	7	30.19	0.00	51	46	82	22	0	0			
07	29.95	0.00	64	58	80	18	2	11	30.08	0.00	49	44	82	16	0	3	30.22	0.00	46	44	92	22	0	0			
10	29.92	0.00	72	60	66	21	4	21									30.21	0.00	65	51	61	19	1	5			
13	29.83	0.00	77	63	62	16	5	19	30.13	0.00	68	46	46	29	5	13	30.15	0.00	75	54	48	26	2	7			
16	29.80	0.00	78	64	63	18	6	13	30.11	0.00	71	47	43	32	2	12	30.06	0.00	79	52	40	30	1	5			
19	29.85	0.00	73	64	74	24	3	13	30.12	0.00	59	45	59	29	1	6	30.02	0.00	65	54	67	17	2	4			
22	29.93	0.00	66	43	44	26	4	10	30.16	0.00	55	45	69	29	0	5	30.03	0.00	61	51	71	20	1	6			
SEP 25									SEP 26									SEP 27									
01	30.02	0.00	55	48	78	18	1	4	29.84	0.00	73	62	68	18	2	7	29.93	0.00	67	62	85	19	0	2			
04	30.03	0.00	57	50	77	18	2	6	29.82	0.00	72	63	73	20	3	13	29.91	0.00	64	62	93	05	0	0			
07	30.01	0.00	60	50	70	19	5	10	29.82	0.00	68	63	84	19	2	7	29.91	0.00	63	61	94	14	0	0			
10	29.96	0.00	68	53	58	19	9	21	29.82	0.00	76	67	74	20	3	12	29.89	0.00	72	67	84	20	2	10			
13	29.91	0.00	78	55	45	22	5	15	29.82	0.00	78	66	65	24	3	12	29.85	0.00	72	66	82	17	3	6			
16	29.85	0.00	81	57	44	19	8	16	29.83	0.00	70	67	89	27	3	7	29.84	0.00	67	64	91	01	2	4			
19	29.85	0.00	75	59	58	19	3	11	29.86	0.00	70	64	83	15	0	2	29.83	0.00	64	62	93	08	0	3			
22	29.87	0.00	74	61	66	18	4	10	29.92	0.00	69	63	82	17	0	2	29.78	0.00	63	61	94	36	0	0			
SEP 28									SEP 29									SEP 30									
01	29.74	0.04	62	60	95	08	0	3	29.98	0.00	54	53	94	02	0	4	30.42	0.00	42	40	94	03	0	0			
04	29.74	0.07	58	56	94	36	0	0	30.05	0.00	52	50	94	27	1	4	30.45	0.00	41	40	94	03	0	0			
07	29.76	0.00	56	55	95	27	0	3	30.15	0.00	49	48	95	33	1	3	30.47	0.00	39	37	94	33	0	0			
10	29.79	0.00	59	57	94	28	0	7	30.25	0.00	54	50	86	29	3	11	30.51	0.00	50	48	95	05	0	0			
13	29.80	0.00	64	56	75	23	4	6	30.28	0.00	61	50	68	29	3	8	30.48	0.00	62	44	52	15	1	10			
16	29.79	0.00	64	56	77	25	2	5	30.30	0.00	62	48	60	28	4	12	30.45	0.00	63	47	56	21	0	2			
19	29.82	0.16	55	52	88	21	1	7	30.33	0.00	51	44	78	03	1	2	30.43	0.00	53	48	82	08	0	2			
22	29.89	0.00	53	51	93	30	2	4	30.39	0.00	45	42	90	03	0	0	30.41	0.00	53	47	80	19	0	4			

### WEATHER NOTES

NOTES:  
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Wind Direction: Directions are those from which the wind is blowing, indicated in tens of degrees from true north: i.e., 09 for East, 18 for South, 27 for West, and 00 or 36 for North.  
 Wind Speed: The observed one-minute average speed in miles-per-hour.  
 Wind Gust: The maximum instantaneous wind speed for the 10-minute period preceding the observation.  
 Rainfall Rate: The instantaneous rainfall rate at the time of observation, calculated by timing consecutive 0.01" pulses from the electronic rain gauge and interpolating this rate for one hour.

### SUMMARY BY HOUR

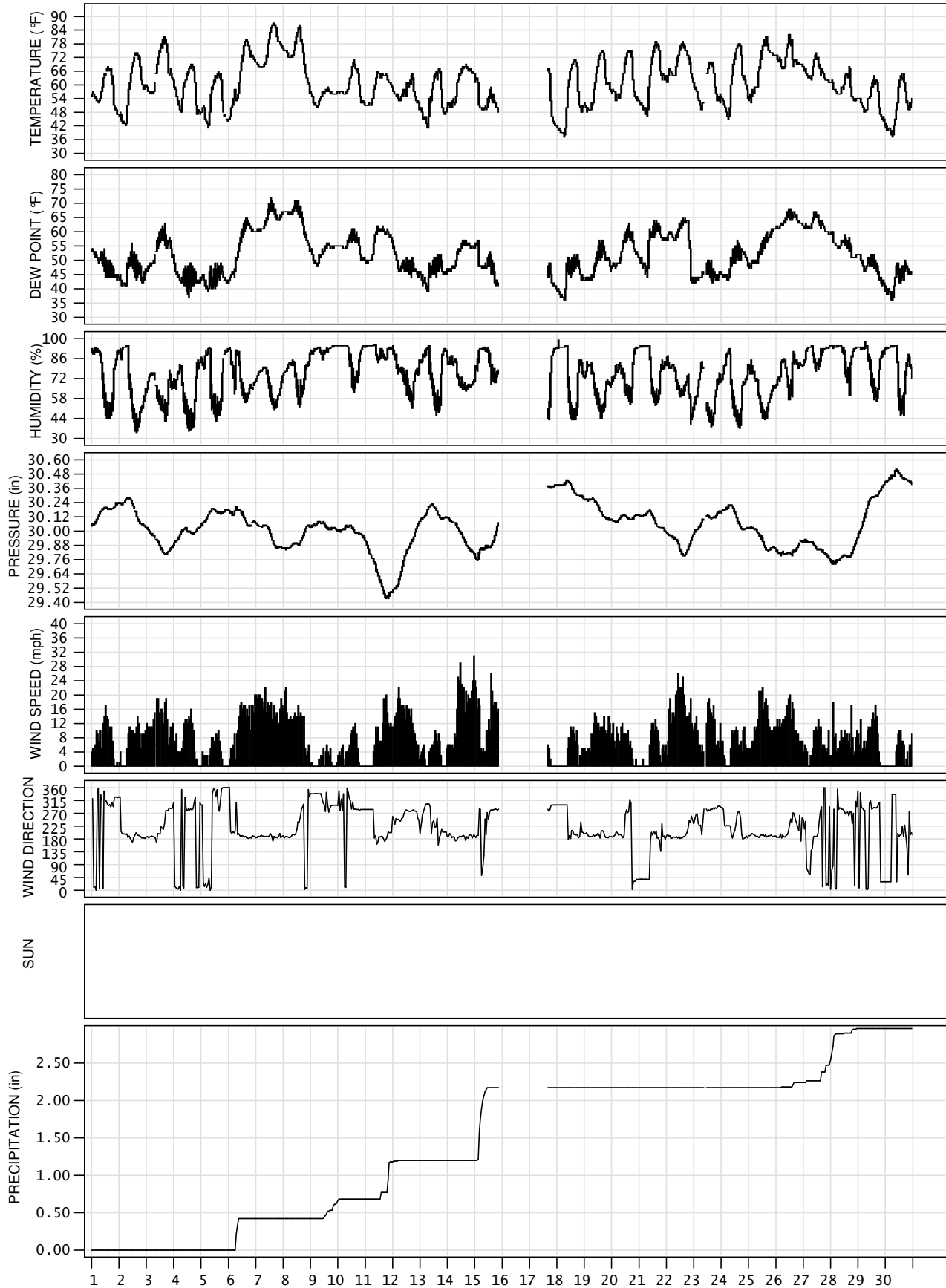
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		30.030	56	51	83	1.4	20	1.2
04		30.031	54	50	86	1.4	21	1.1
07		30.057	53	49	88	1.2	20	1.0
10		30.065	63	54	75	2.9	20	2.2
13		30.034	69	55	62	3.3	23	2.2
16		30.008	71	55	60	2.8	23	1.6
19		30.019	63	53	72	1.4	21	0.9
22		30.042	58	51	79	1.5	21	1.1

## HOURLY PRECIPITATION (Water Equivalent) September 2007: Westford

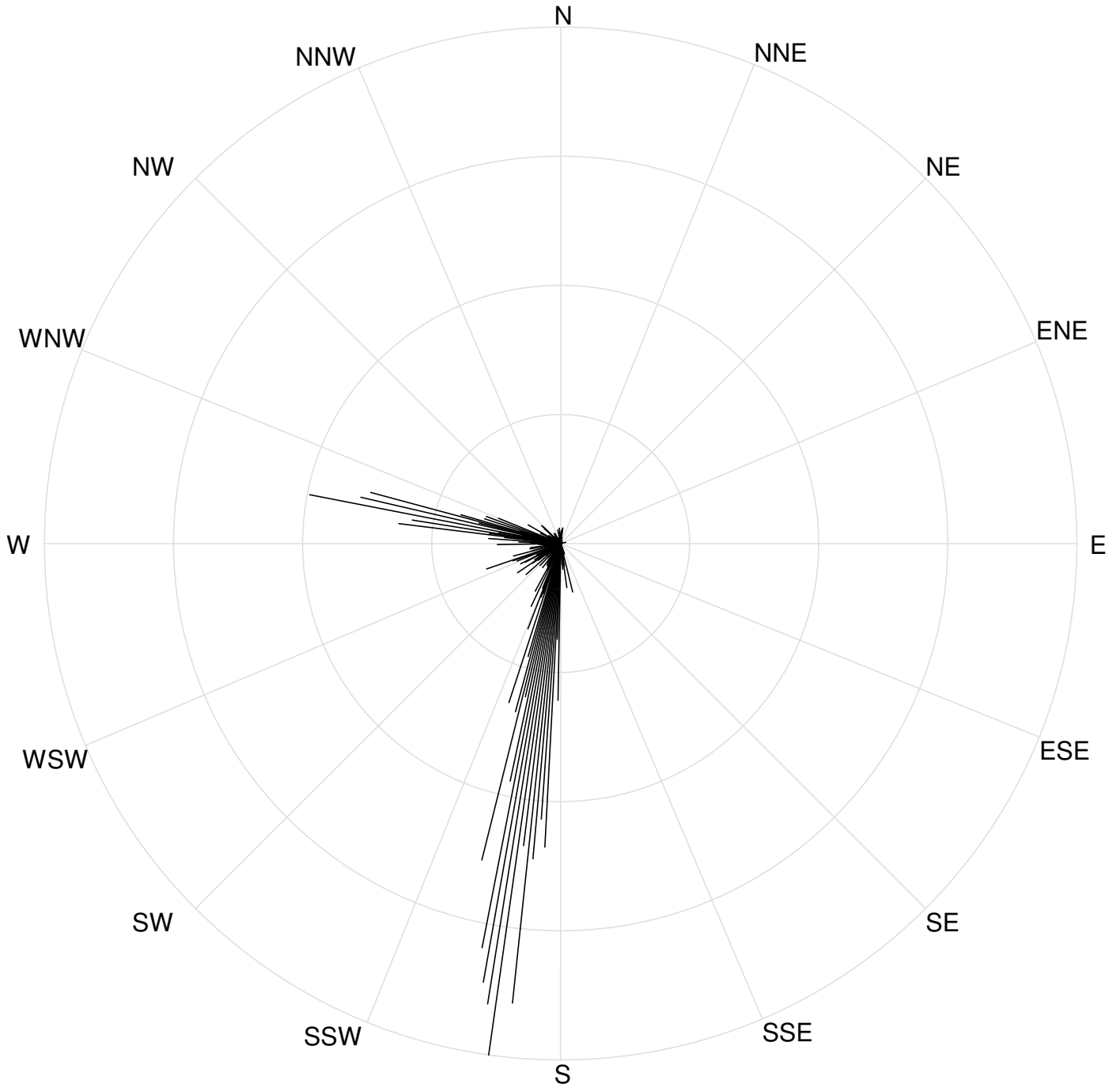
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																								01	
02																									02
03																									03
04																									04
05																									05
06																									06
07							0.22	0.11	0.09																07
08																									08
09																									09
10	0.02											0.02	0.02	0.02	0.04		0.01			0.06	0.02		0.02	0.03	10
11																									11
12	0.01				0.01									0.09						0.18	0.22	0.01			12
13																									13
14																									14
15			0.01	0.38	0.16	0.14	0.11	0.06	0.06	0.02	0.03														15
16																									16
17																									17
18																									18
19																									19
20																									20
21																									21
22																									22
23																									23
24																									24
25																									25
26					0.01										0.03	0.03									26
27															0.12										27
28	0.09	0.09	0.02	0.14	0.02	0.01						0.01							0.04	0.09			0.01	0.06	28
29																									29
30																									30
Sum	0.12	0.09	0.17	0.40	0.19	0.14	0.33	0.17	0.15	0.02	0.03	0.03	0.02	0.11	0.07	0.15	0.01	0.00	0.04	0.34	0.24	0.01	0.04	0.09	Sum

During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA September 2007: Westford



Wind Rose: September 2007  
**Westford**



Maximum direction of wind: 81.2 miles from 188°.  
1450.9 total miles of wind.